

REMARKS

In the Office Action, the Examiner rejected claim 14 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Old claim 14 is similar to new claims 20 and 27.

Claims 20 and 27 are described in paragraphs 0061 and 0062 of the substitute specification. Paragraph 0061 discloses that, with one polarity of an alternating current source, the target 29a (i.e., the first electrode 21a) forms a cathode and the target 29b (i.e., the second electrode 21b) necessarily forms an anode. Similarly, paragraph 0062 discloses that, when the polarity of the alternating current source changes, the target 29b (i.e., the second electrode 21b) forms the cathode, and the target 29a (i.e., the first electrode 21a) forms the anode.

As can be seen, the present claims comply with the written description requirement of 35 U.S.C. §112, first paragraph.

In the Office Action, the Examiner rejected the claims under 35 U.S.C. §103(a) as being unpatentable over Hartsough in view of Sproul.

Applicants are concerned that the Examiner may believe that the previous claims recited increasing or

decreasing the reactive gas flow rate in order to control the optical characteristic. However, that is not the case.

The present claims make it clear that the reference to increasing or decreasing the reactive gas flow rate is merely to define the hysteresis region. This hysteresis region is the region where the optical characteristic that would have been obtained if the reactive gas flow rate were increased is different than the optical characteristic that would have been obtained if the reactive gas flow rate were decreased. Accordingly, if the reactive gas flow rate were increased and decreased within the range of flow rates that give rise to the hysteresis effect, the hysteresis effect would make it very difficult to achieve a desired optical characteristic.

To avoid this hysteresis effect, the invention of independent claim 15 is directed to adjusting the conveying speed while the reactive gas flow rate is in this hysteresis region so as to achieve the desired optical characteristic that cannot be easily achieved if the reactive gas flow rate were adjusted instead of the conveying speed.

(In spite of the discussion above, independent claim 15 does not recite either adjusting the reactive gas flow rate or controlling the reactive gas at a constant flow rate. Thus, independent claim 15 can be read on a system

that adjusts both the conveying speed and the reactive gas flow rate as well as on a system that adjusts the conveying speed but not the reactive gas flow rate.)

Hartsough describes a system in which both the conveying speed and the reactive gas flow rate are set to constant values so as to grow aluminum oxide at a predictable rate. Hartsough does not disclose adjusting the speed of conveying so as control an optical characteristic of a thin film in a hysteresis region. Indeed, Hartsough discloses neither adjusting the speed of conveying nor an optical characteristic hysteresis region.

Similarly, Sproul does not disclose adjusting the speed of conveying so as control an optical characteristic of a thin film in a hysteresis region. Indeed, Sproul discloses neither adjusting the speed of conveying nor an optical characteristic hysteresis region.

Accordingly, Hartsough and Sproul would not have led the person of ordinary skill in the art to the invention of independent claim 15.

Therefore, independent claim 15 is not unpatentable over Hartsough in view of Sproul.

Because independent claim 15 is not unpatentable over Hartsough in view of Sproul, dependent claims 16-21

likewise are not unpatentable over Hartsough in view of
Sproul.

For similar reasons, independent claim 22 is not
unpatentable over Hartsough in view of Sproul.

Because independent claim 22 is not unpatentable
over Hartsough in view of Sproul, dependent claims 23-28
likewise are not unpatentable over Hartsough in view of
Sproul.

CONCLUSION

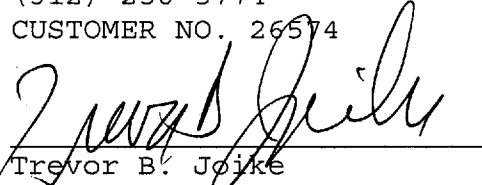
In view of the above, the claims of the present application patentably distinguish over the art applied by the Examiner. Accordingly, allowance of these claims and issuance of the present application are respectfully requested.

The Commissioner is hereby authorized to charge any additional fees that may be required, or to credit any overpayment, to account No. 501519.

Respectfully submitted,

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